

Please replace the paragraphs at page 6, lines 3-32 of the specification with the following substitute paragraphs:

Another aspect of the invention is a transgenic woody perennial plant with improved nitrogen metabolism which comprises at least one transgene expressing the coding sequence of glutamine synthetase. In preferred embodiments, the glutamine synthetase gene is from a gymnosperm, from *Pinus sylvestris*, and is Genbank Accession No. X69822. In other preferred embodiments, the transgenic plant is in the family Salicaceae, the genus *Populus*, is a hybrid *Populus tremula* X *P. alba*, and is clone INRA 717 1-B4 of the hybrid *Populus tremula* X *P. alba*. This aspect additionally includes a reproductive unit from the transgenic plant.

Another aspect of the invention is a transgenic woody perennial that exhibits a growth rate over the first three months in the greenhouse that is at least 10% greater than that of equivalent untransformed plants. In a preferred embodiment, the plant additionally exhibits a protein concentration (g/gfw) that is at least 10% greater than that of equivalent untransformed plants after the first 3 months in the greenhouse. In a most preferred embodiment, the transgenic plant additionally exhibits a chlorophyll concentration (g/gfw) that is at least 10% greater than that of equivalent untransformed plants after the first 3 months in the greenhouse. In other preferred embodiments, the plant is in the family Salicaceae, in the genus *Populus*, a hybrid of *Populus tremula* X *P. alba*, and is clone INRA 717 1-B4 of the hybrid *Populus tremula* X *P. alba*. This aspect additionally contains a reproductive unit of the transgenic plant.

Please replace the paragraph which begins at page 22, line 14, and ends page 23, line 16 of the specification with the following substitute paragraph.

*Ap*

Also provided in accordance with the current invention is a poplar tree that has a statistically significant higher growth rate, higher protein and chlorophyll content in mature leaves, and larger mature leaf dimensions than its untransformed equivalent. In a preferred embodiment, this transgenic tree exhibits at least 10% greater growth rate during the first 3 months in the greenhouse after transformation as compared to untransformed trees of the same cultivar. More preferably, the transgenic poplar is 40% greater, and in a most preferred embodiment, the transgenic tree is 60% greater. In a more preferred embodiment, the transgenic poplar additionally has at least 10% greater grams of protein in the leaf tissue at 3 months per gram fresh weight as compared to untransformed trees of the same cultivar. More preferably, the tree exhibits at least 15% greater protein, and most preferably, the tree exhibits at least 25% greater protein per gram per gram fresh weight. In a particularly preferred embodiment, the transgenic poplar additionally has at least 10% greater grams of chlorophyll per gram fresh weight in mature leaf tissue as compared to control trees of the same cultivar. In a more preferred embodiment, the trees have at least 15% greater chlorophyll, and in a most preferred embodiment, the trees have at least 20% greater chlorophyll per gram per gram fresh weight. In a more particularly preferred embodiment, the transgenic poplar additionally has at least 10% greater area per mature leaf as compared to control trees of the same cultivar. In a more preferred embodiment, the trees have at least 15% greater leaf area, and in a most preferred embodiment, the trees have at least 20% greater leaf area per leaf. In regards to the present invention, statistical significance of quantified differences is determined using one-way analysis of variance (ANOVA). This statistical test is well known to those in the art, and computer programs that carry out this test are commercially available. The level of probably (P) used is